

國立台灣科技大學 114學年 第2學期 課程大綱

Spring 2026 NTUST Course Outline

授課教師：孫世勝

Instructor: Shih-Sheng Sun

課程名稱：高等無機化學

Course Title : Advanced Inorganic Chemistry

2026/6/22

課程代號： CH5111701 Course Code	必選修：選修/半學年 Required/Elective: Elective/Half Yr.
學分數： 3 Credits	先修課程： Prerequisites
節次教室： F2(IB-607) F3(IB-607) F4(IB-607) Time/Location	
專業核心能力： Core Professional Competencies	
課程網址： Course Website https://sites.google.com/view/sssunlab/	
課程宗旨： Course Objectives	An introduction to physical inorganic chemistry for the advanced graduate students. Topics covered include chemical structure and bonding theory in molecular systems and various spectroscopic techniques focusing on using these tools to address problems in inorganic chemistry.
課程大綱： Outline of Lectures	分子光化學/光物理、配位場論、晶體場論、強場與弱場的差異、配位化合物之分子軌域理論、配位化合物之電子光譜、對稱與反應途徑、配位化學。 Principles of Molecular Photochemistry/Photophysics, Ligand Field Theory; Crystal Field Theory; Difference Between Strong and Weak Field; Molecular Orbital Theory of Complexes; Electronic Spectroscopy, Symmetry and Reaction Path; Coordination Chemistry.
授課方式： Method of Instruction	講授 Lecture : 0% 分組討論 Group discussion : 0% 案例研討 Case study : 0% 操做練習 Practical exercises : 0% 講授 Lecture : %
教科書： Textbooks	
參考書目： References	1. Modern Molecular Photochemistry of Organic Molecules, Nicholas J. Turro, V. Ramamurthy, J. C. Scaiano, 2010 2. Principles of Fluorescence Spectroscopy, 3rd edition, J. R. Lakowicz, 2007 3. Solvent and Solvent Effects in Organic Chemistry, 3rd edition, Christian Reichardt, 2003. 4. "Excited states and Photochemistry of Organic Molecules" by M. Klessinger and J. Michl (VCH)
修課須知： Notice	
評量方式： Grading Homework, quiz, exam, class performance	

備註說明：
Notes